PATENT ABSTRACTS OF JAPAN

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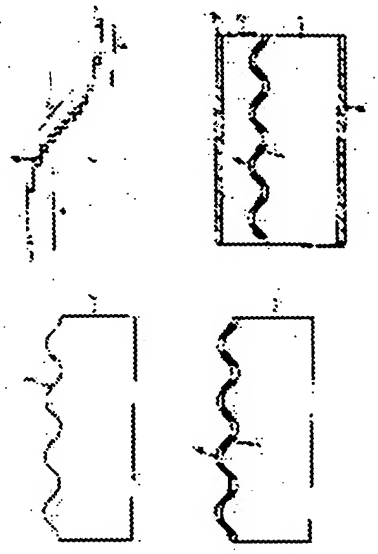
(54) MANUFACTURE OF DISTRIBUTED FEEDBACK TYPE SEMICONDUCTOR LASER

(57)Abstract:
PURPOSE: To make the period of a diffraction grating double that of a conventional one to improve it in controllability for the stabilization of it in characteristics by a method wherein an active layer is grown on the atomic step part of a diffraction grating thermally deformed into a sine wave.
CONSTITUTION: A diffraction grating is formed on the surface of a conductive semiconductor substrate 1, then the diffraction grating is formed into a sine wave shape through annealing, and a part 5 where an active layer is dense and a part 6 where the active layer is sparse are formed on the surface of the thermally deformed diffraction grating 3 through an atomic layer epitaxial growth method. At this point, the active layer 4 is formed on the atomic step part of the diffraction grating 3, which process is so controlled as to enable the active layer to vary periodically ion density. Lastly, a conductive type semiconductor layer 7 is formed on the active layer 4, and conductive type electrodes 8 and 9 are provided respectively.



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